In the Specification

Please replace the paragraph beginning at page 1, line 3, with the following rewritten paragraph:

This invention relates to devices for measuring signals from a body cavity, more specifically to infrared noncontact ear thermometers, primarily intended for medical and veterinary applications. The invention is based on U.S. Provisional Patent Application No. 60/399,021 filed July 29, 2002.

Please replace the paragraph beginning at page 2, line 8, with the following rewritten paragraph:

Typically, the IR probes are used in combination with the reusable or disposable probe covers made in form of thin polymer sheaths. These covers are exemplified by U.S. patents Nos. Re. 34,599 issued to Suszynski et al. and 6,347,243 issued to Fraden. A probe cover envelopes the probe and forms a protective physical barrier between the probe surface and the ear canal tissue.

Please replace paragraph staring on line 15, page 3, with the following rewritten paragraph:

The present invention describes a probe for insertion into a body cavity, such as an ear canal, rectum, mouth and other that may be used for collecting medical signals. However, below we describe a specific probe ~~for~~ of an instant ear thermometer as an example of the most typical application. The probe has a reduced heat transfer through it side walls and thus substantially minimizes effects of the lateral heat transfer through the probe walls. Such a probe may be fabricated of such resins as ABS, nylon, and other plastics having a continuous or foamy structures that may

further reduce thermal conductivity. Glass or ceramics also may be employed for fabricating the probe. By way of comparison with prior art, Fig. 1 shows a conventional prior art probe 5 that is attached to the infrared (IR) ear thermometer 4 which is shown here only partially. Probe 5 is covered with probe cover 6 having attachment ring 7. The probe cover is a thin plastic sheath. The assembly is inserted into ear canal 2 of ear 1. Distal end 10 of probe 5 receives IR emission from ear drum 3 and passes it to the IR sensor (not shown). Fig. 2 shows a cross-sectional view of probe 5 inserted into ear canal 2. IR sensor 8 and waveguide 9 are located inside the probe. These two components must be protected from heat that may be conducted from body tissue 15 through thin probe cover 6 and wall 11 of probe 5. Since body tissue 15 makes an intimate contact at area 16 with the outer surface of probe 5, heat relatively easily is conducted through wall 11 to waveguide 9 and subsequently to sensor 8. Air gap 18 between waveguide 9 and wall 11 helps reducing heat transfer but usually is not sufficient for a reliable thermal insulation. An air gap may be increased only on the expense of the wall 11 thickness that, in turn, will lead to reduction of a mechanical integrity and strength of probe 5.

In The Drawings:

Please replace Fig. 5 with the attached corrected drawing.

In The Claims:

This listing of claims will replace all prior versions and listings of respective claims in the application:

1. (Currently Amended) A probe of a medical instrument that is intended for insertion into a patient's body orifice, such probe has an inner surface and the outer surface which is shaped to contain at least one cavity encircled by a ridge.

2. (Currently Amended) A probe of claim 1 where said cavity is covered by outer thin skin that is permanently attached to said ~~outer surface~~ ridge.

3. Cancelled

4. (Currently Amended) A probe of claim ~~3~~ 1 ~~where said~~ which contains multiple cavities being ~~are~~ randomly distributed along said outer surface.

5. A probe of claim 1 is fabricated of material having low thermal conductivity

6. A probe of claim 1 further comprises a polymer probe cover that envelopes said outer surface.

7. A method of thermal insulation of a medical probe, comprising a step of forming indentations on the outer surface of the probe.

8. (Currently Amended) A method of thermal insulation of a medical probe of claim 7, further comprising a step of covering said indentations with a layer of thin protective material having low thermal conductivity.